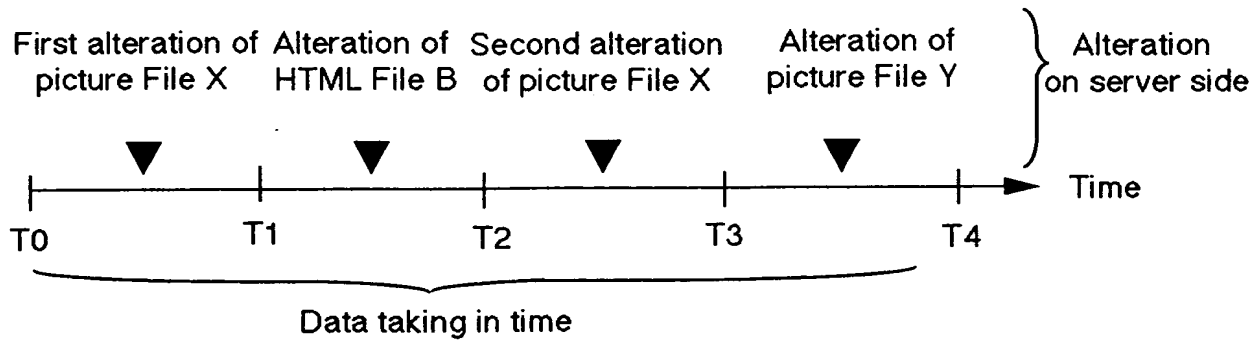
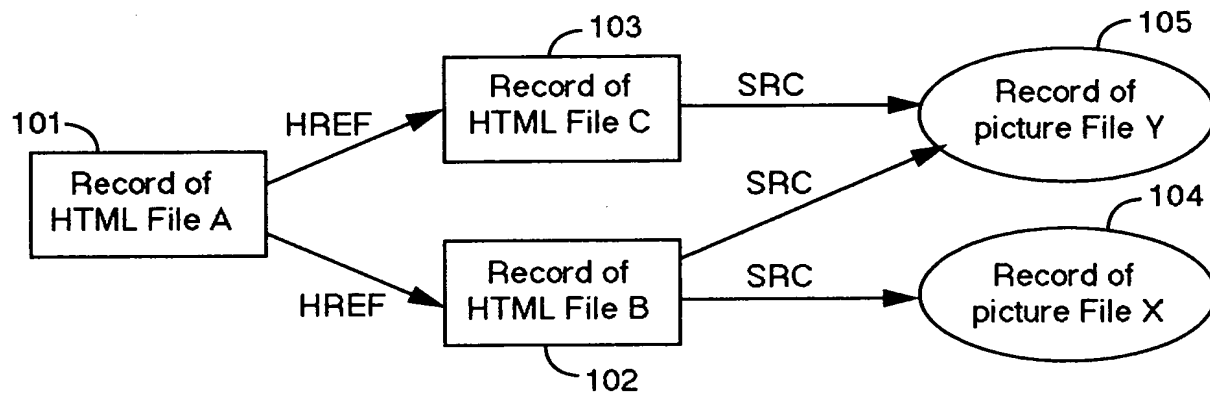


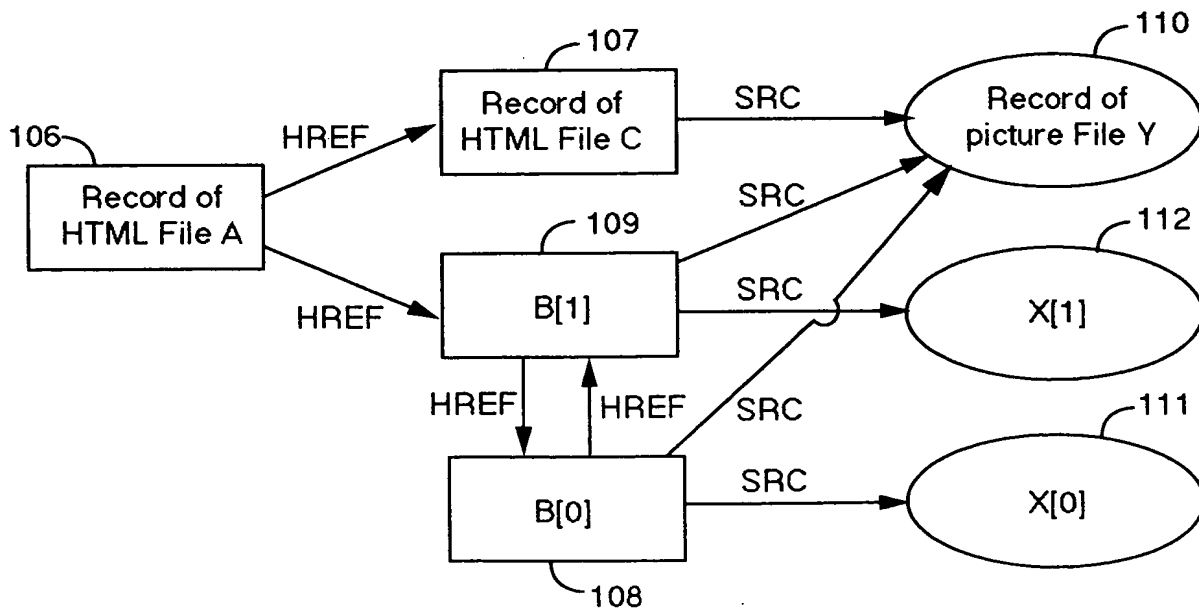
Fig.1



(a) Time series



(b) Configuration of web data record taken-in at T0



(c) Configuration of web data record taken-in at T1

Fig.2

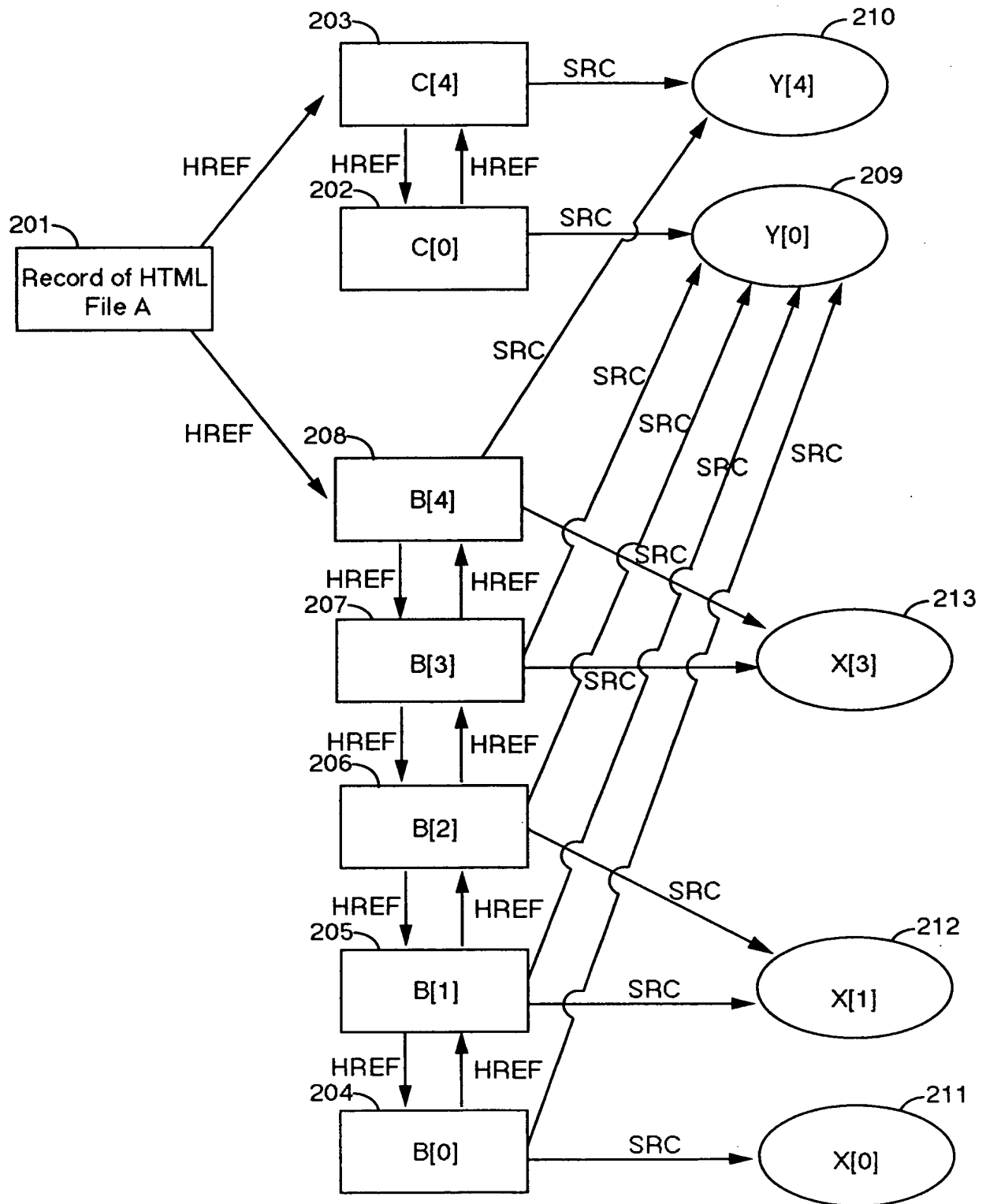


Fig.3

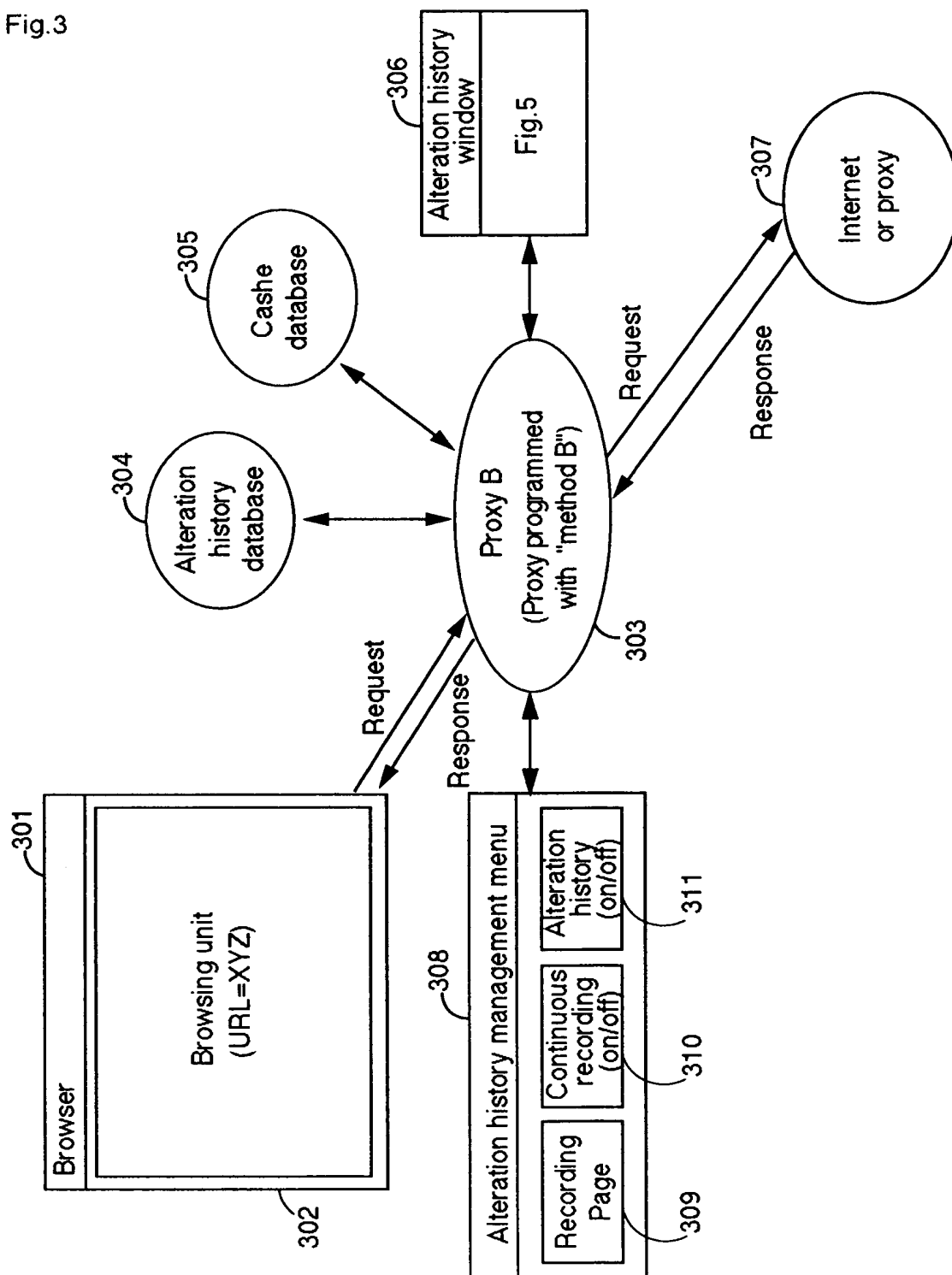
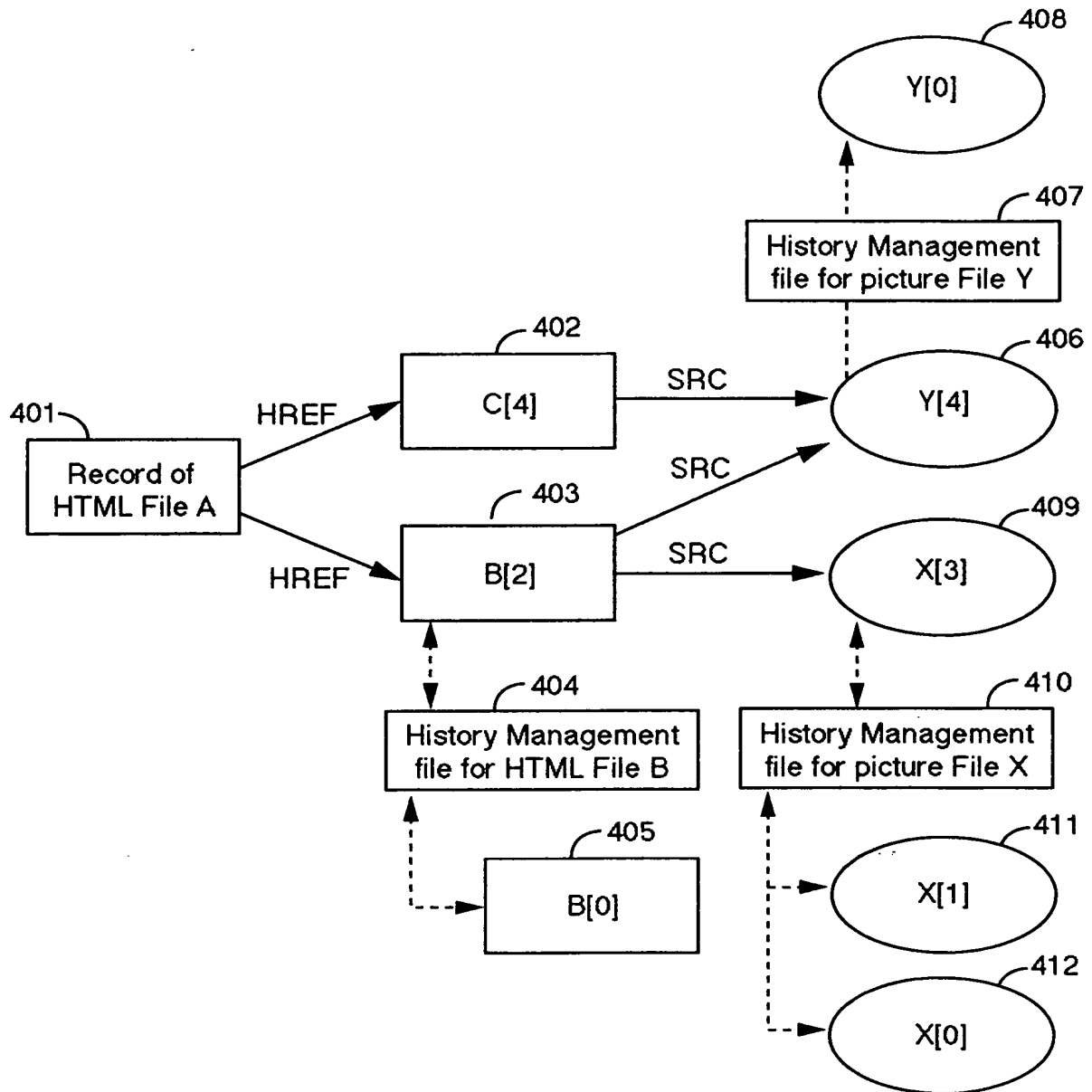
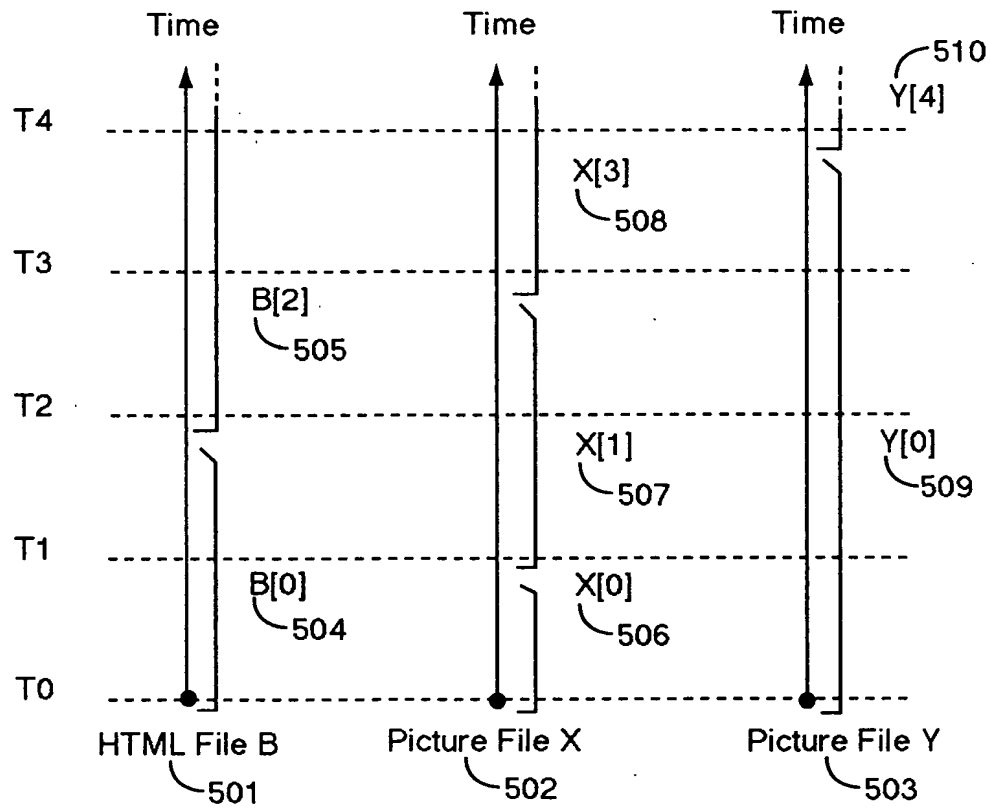


Fig.4



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Fig.5



Detailed flowchart of processes are mentioned in other figures

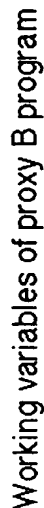
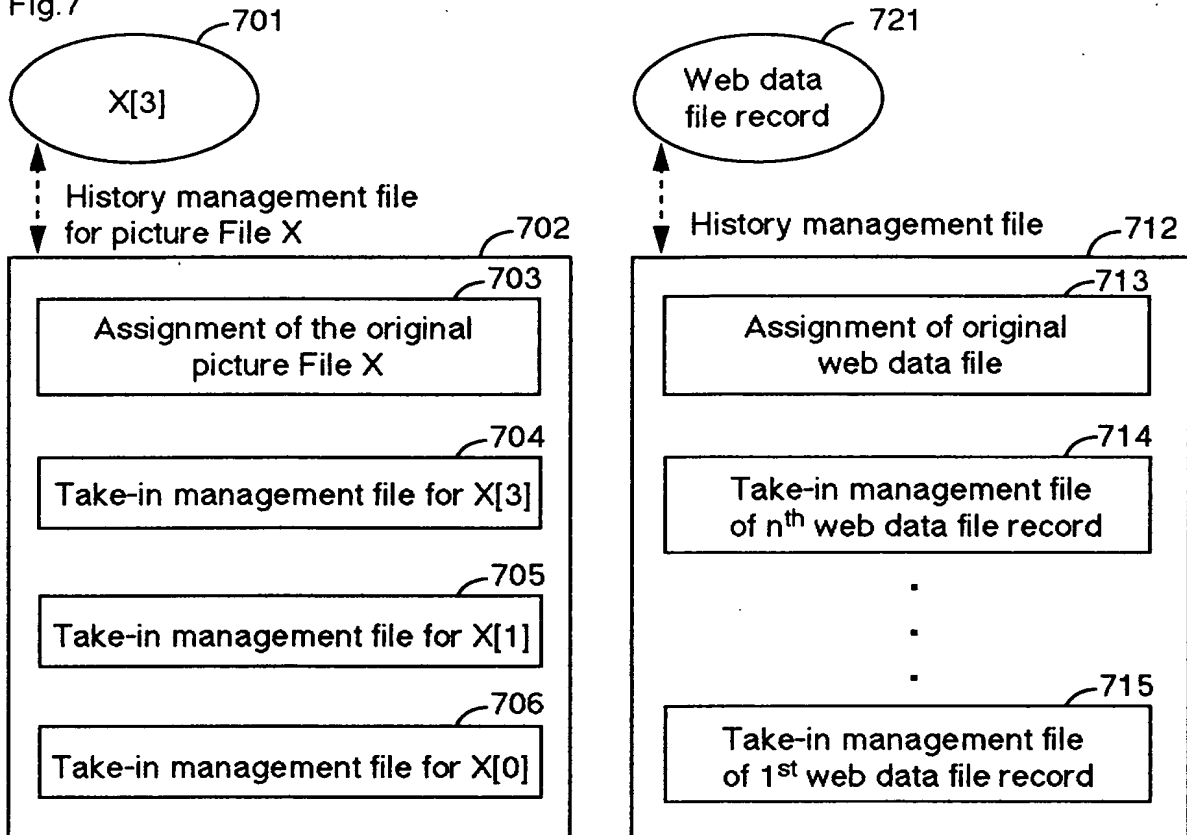
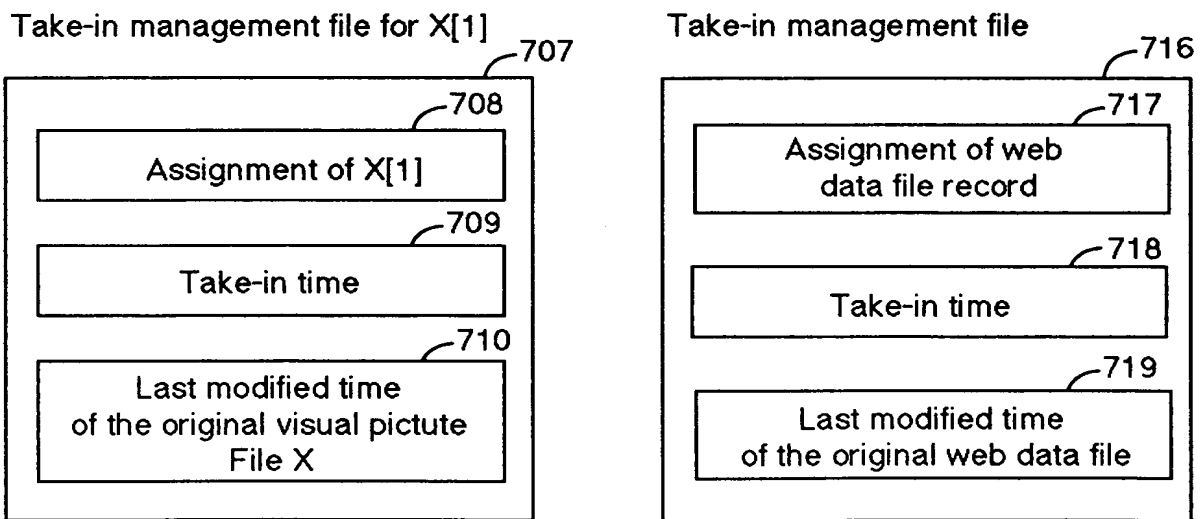


Fig.7



(a) Structure of history management file



(b) Structure of take-in management file

Fig.8

Providing file process

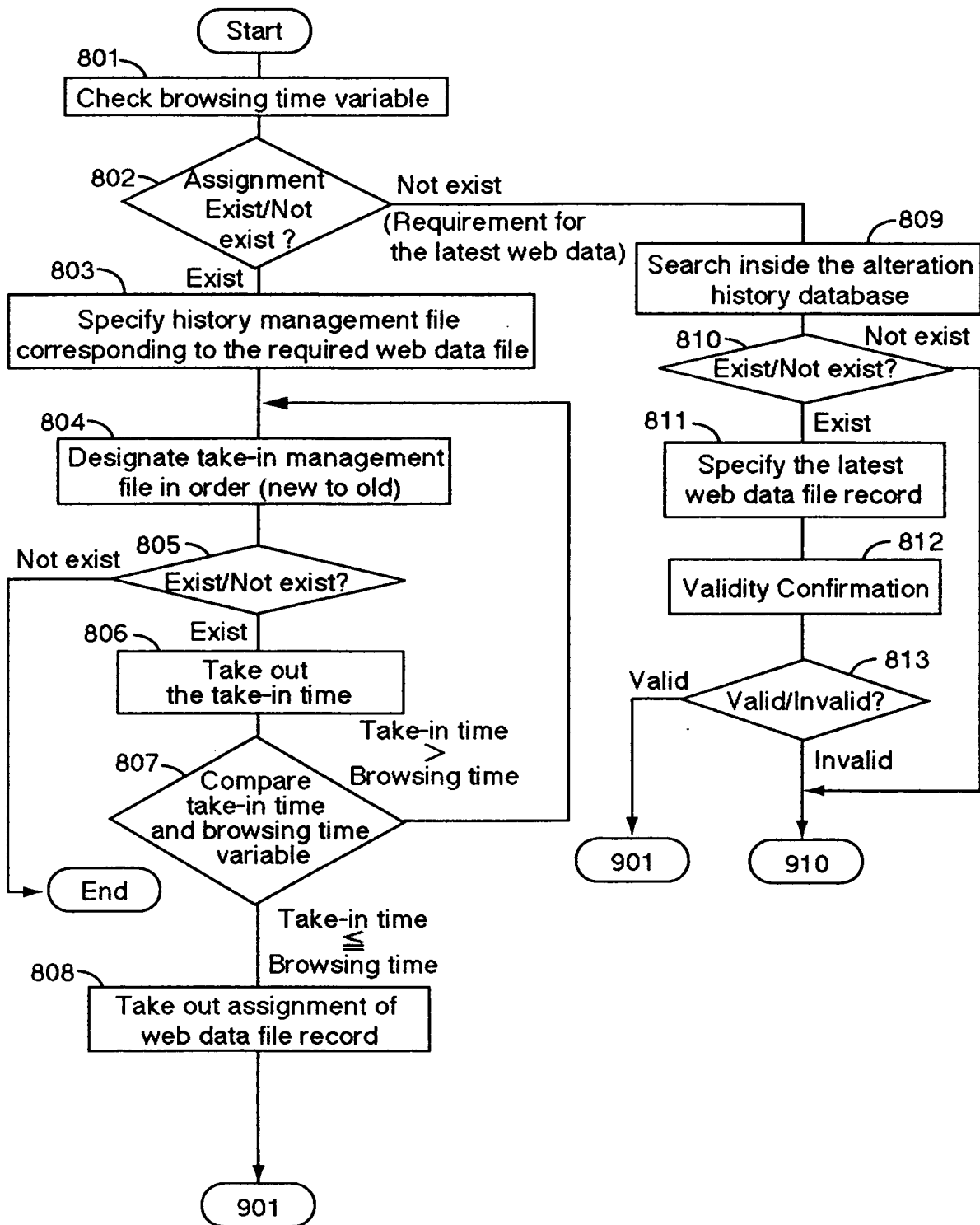
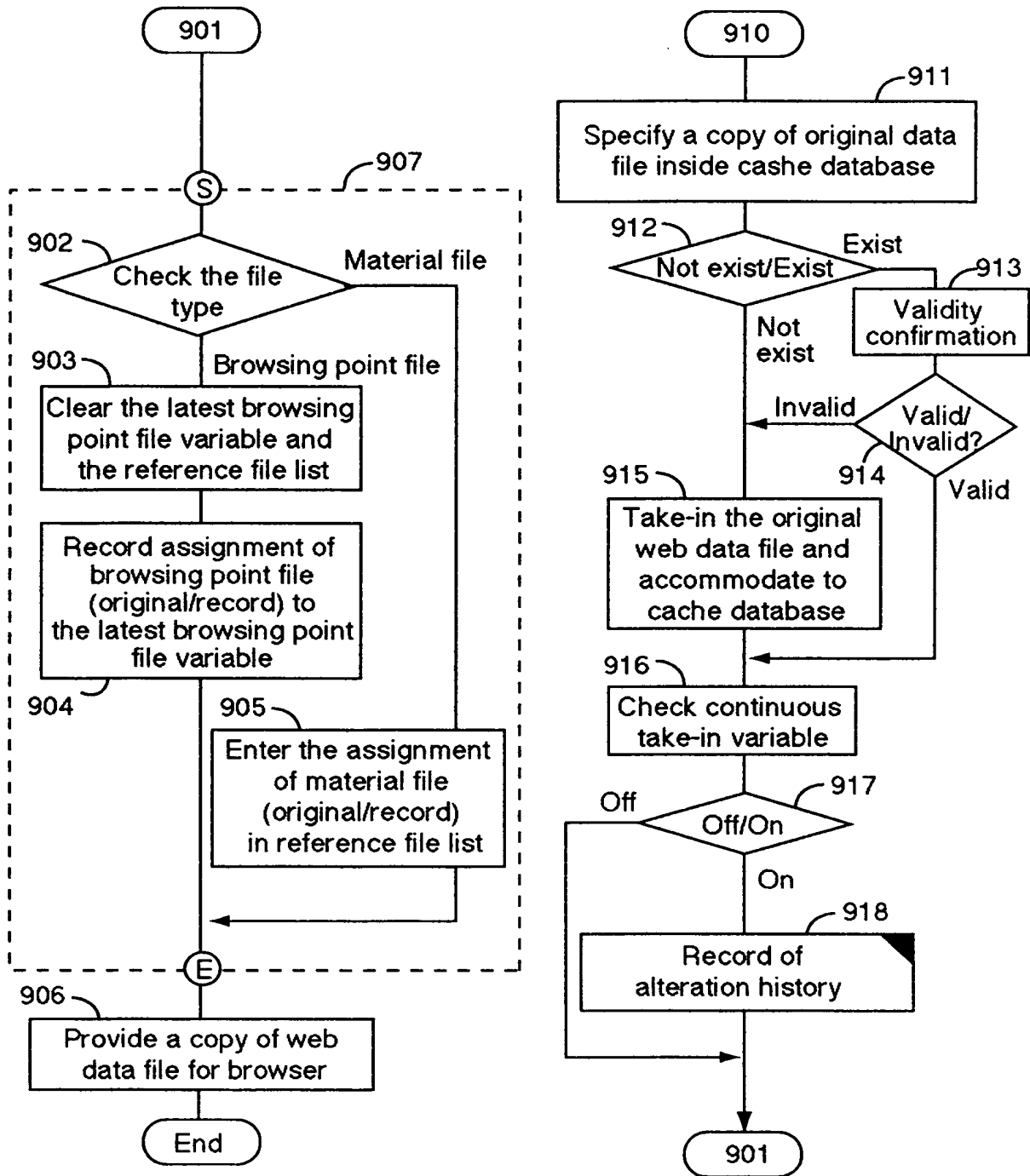


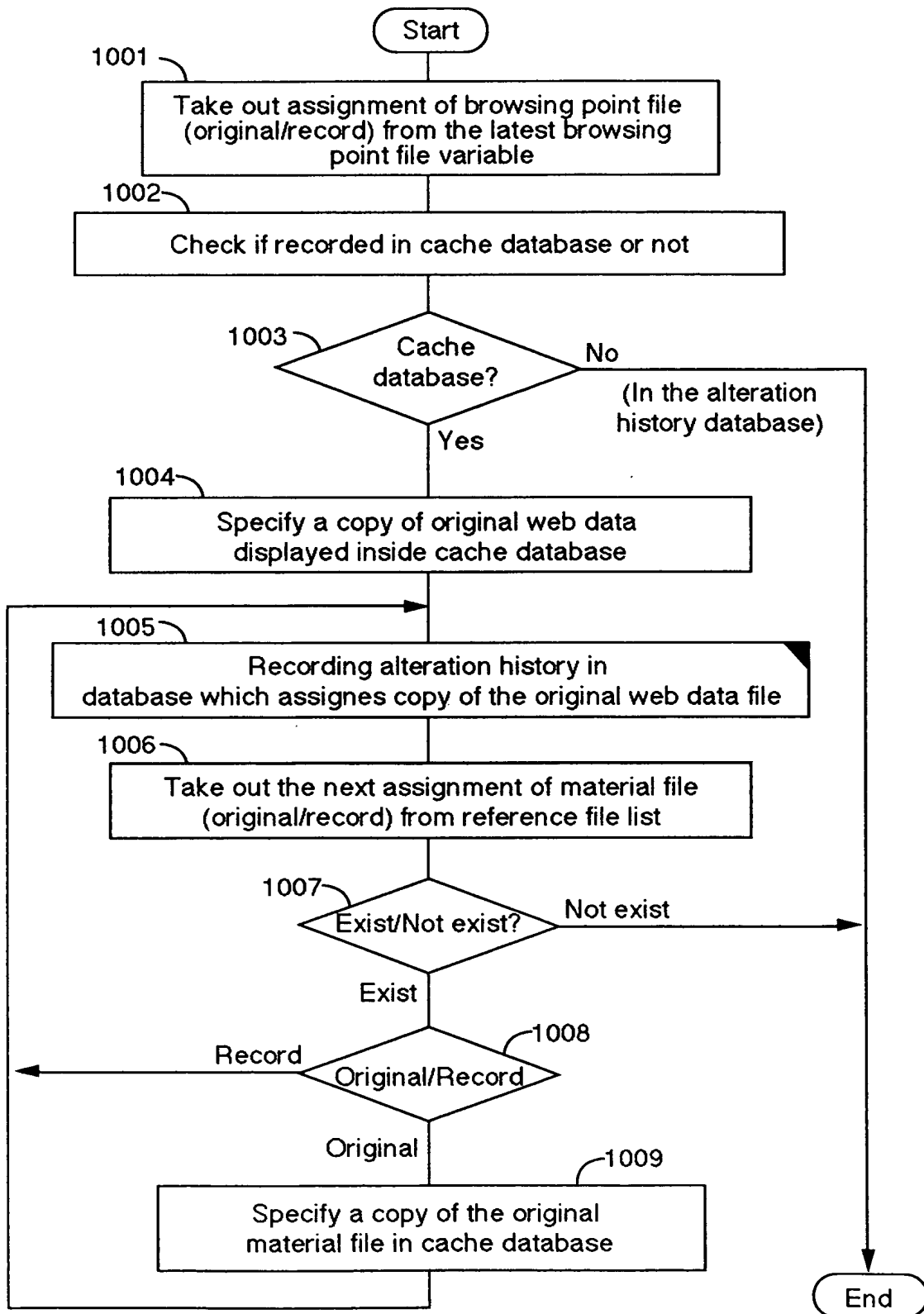
Fig.9

File providing process part 2



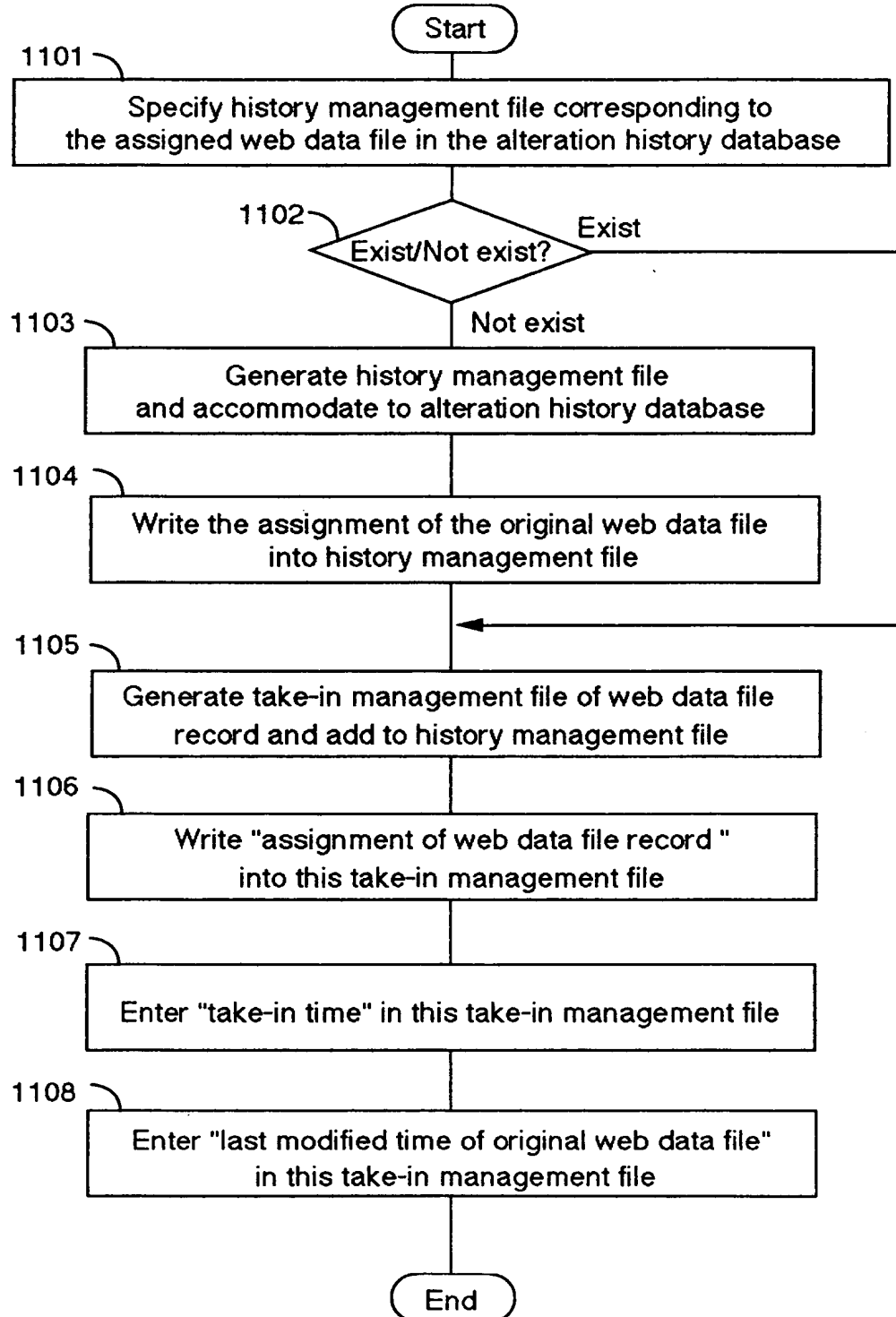
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Fig.10

Recording process of alteration history

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Fig.11 Recording process into alteration history database which assigned a copy of the original web data file



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Fig.12

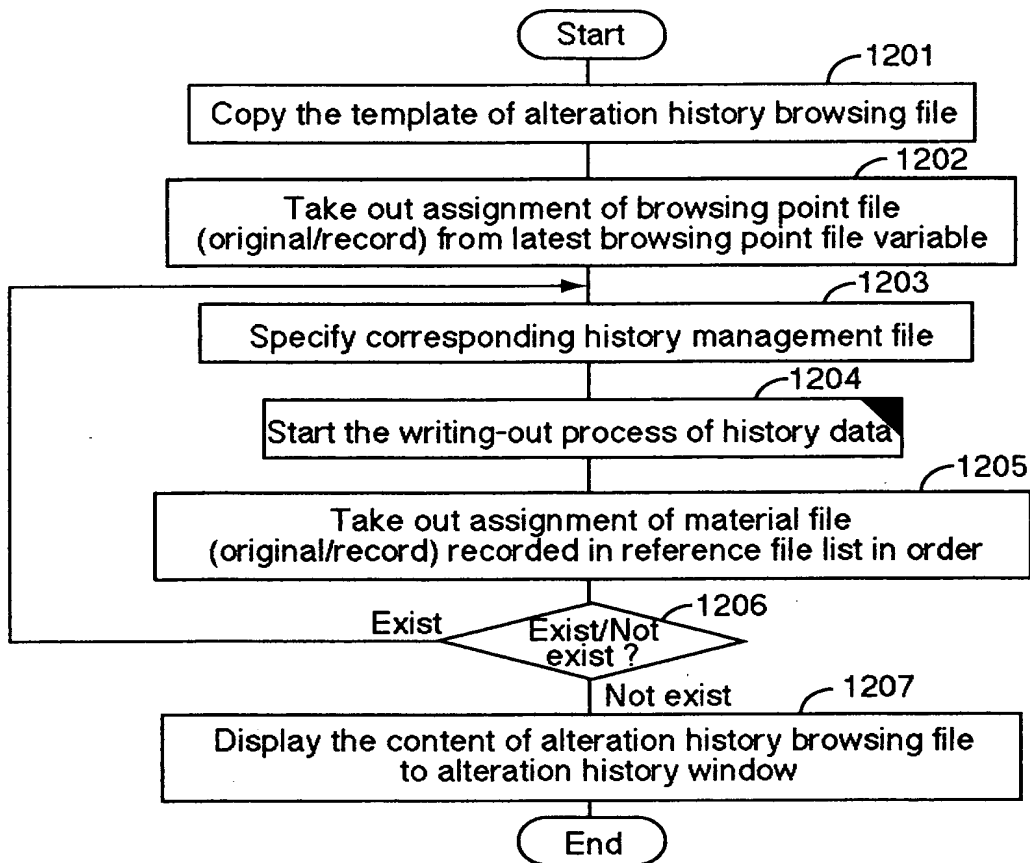
Browsing process of alteration history

Fig.13

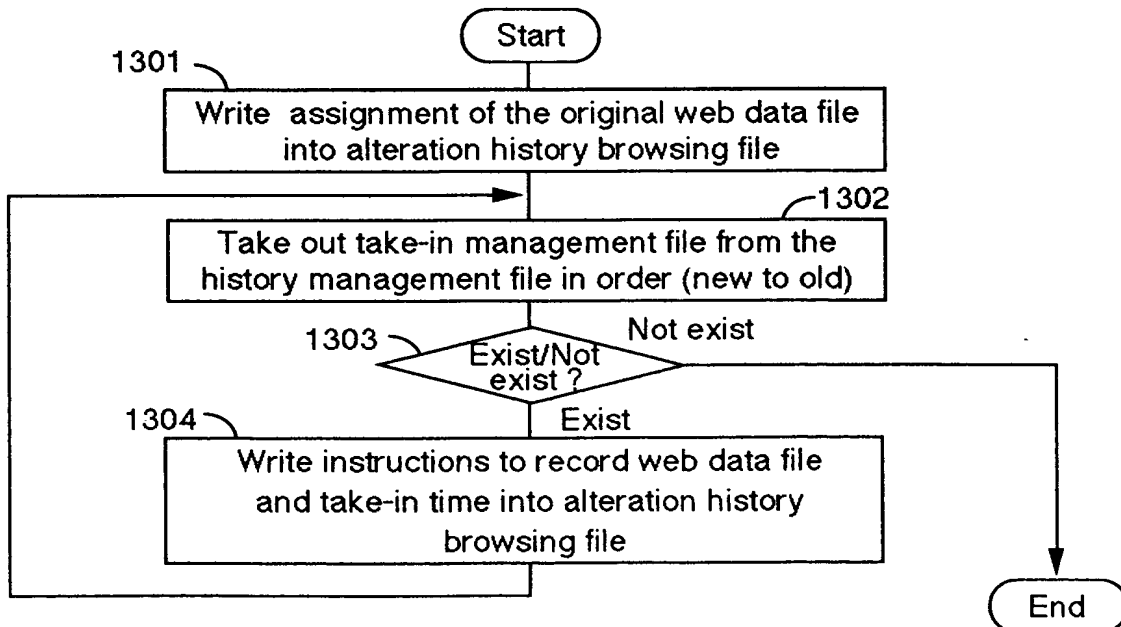
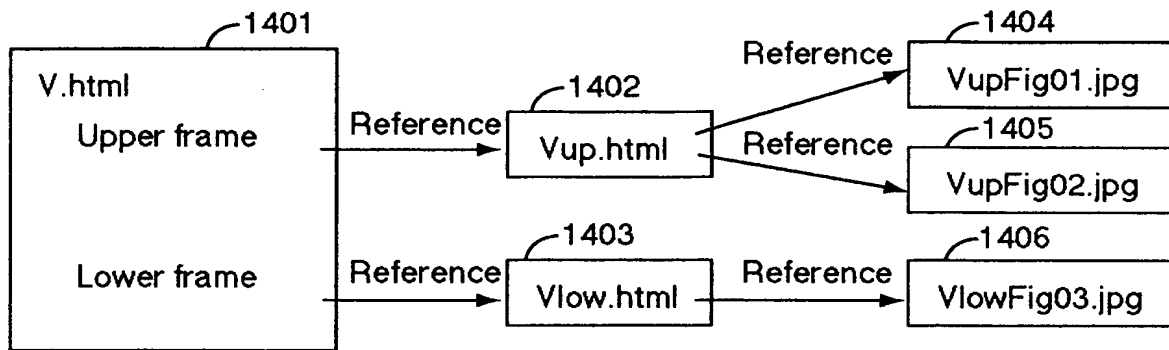
Writing-out process of history data

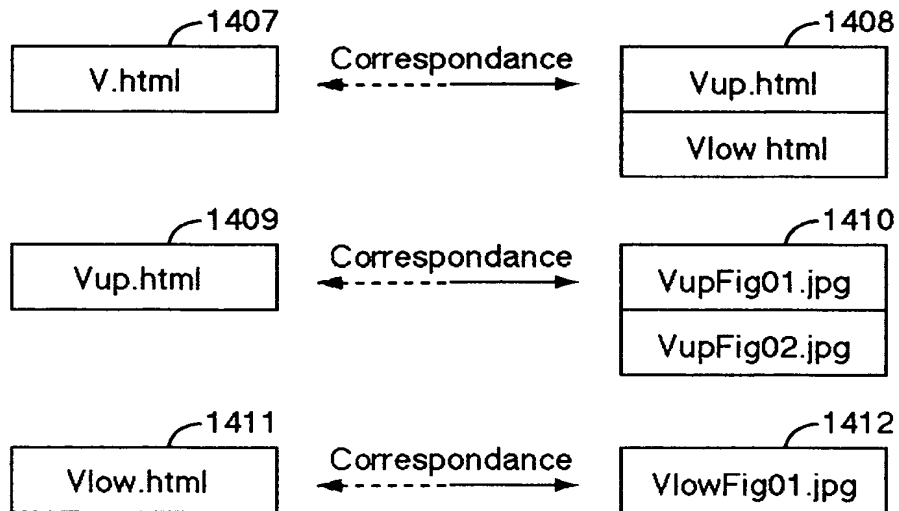
Fig.14



(a) Example of frame configuration

Lates browsing point file valuable

Reference file list



(b) State of variable in Proxy B

Fig.15

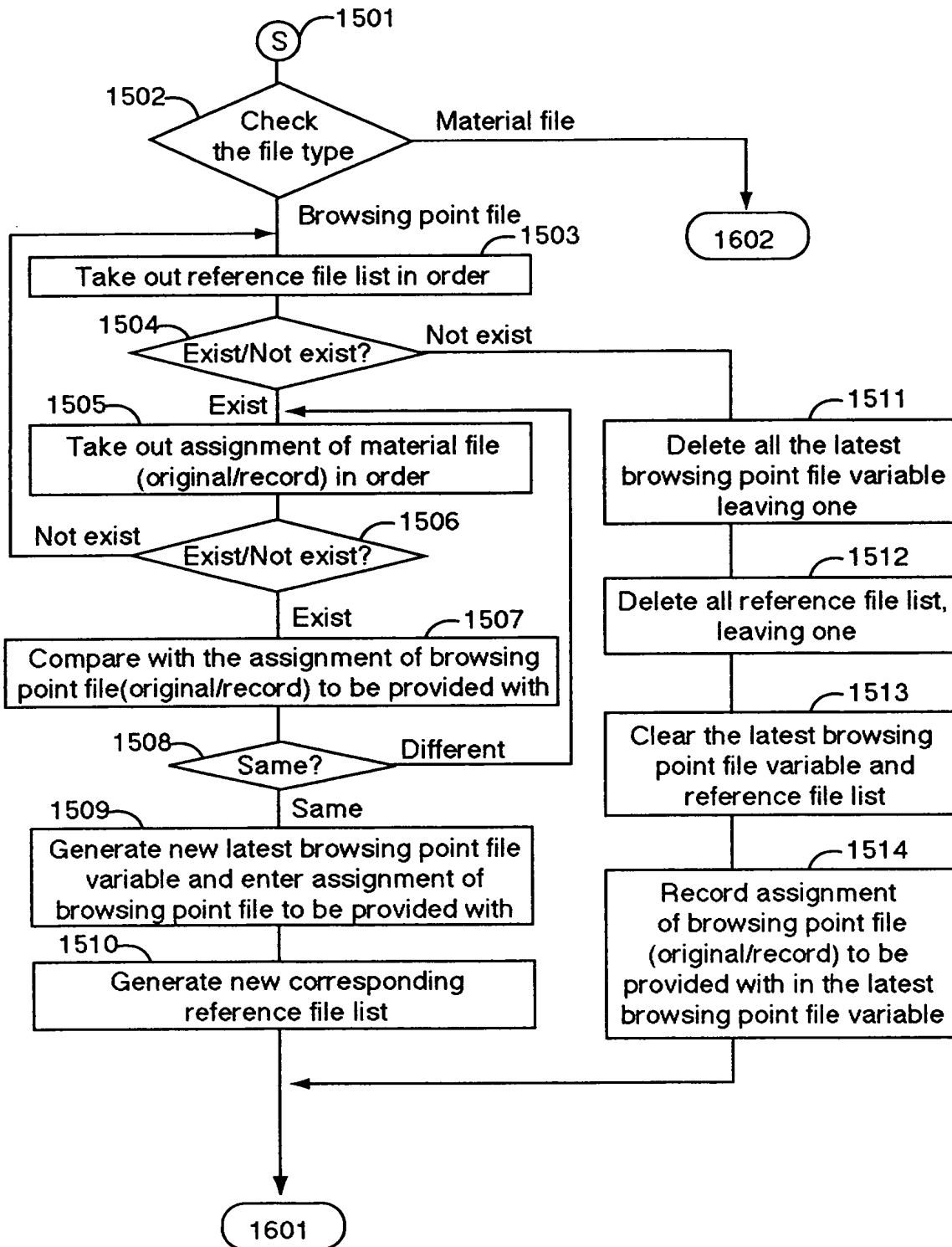


Fig.16

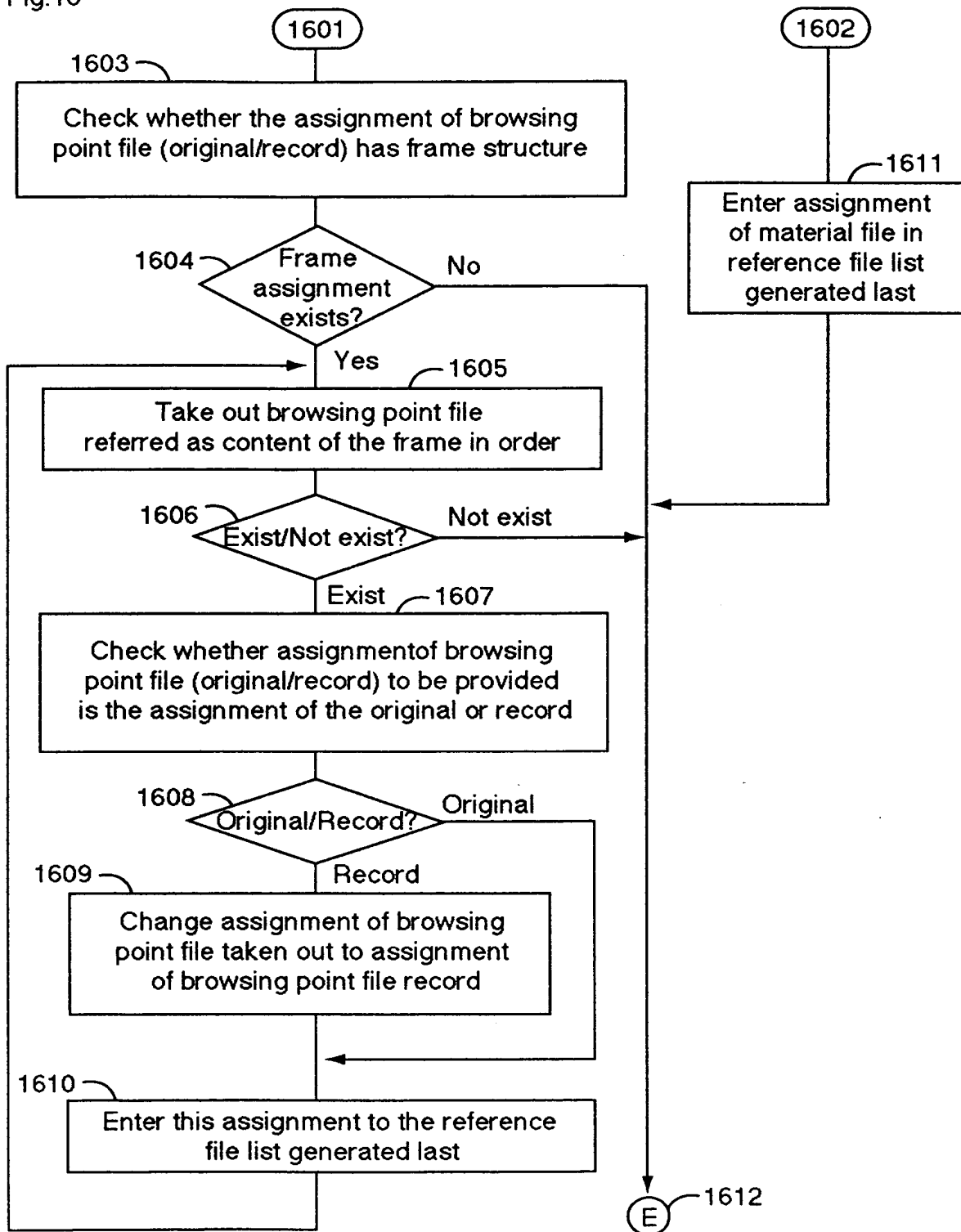


Fig.17

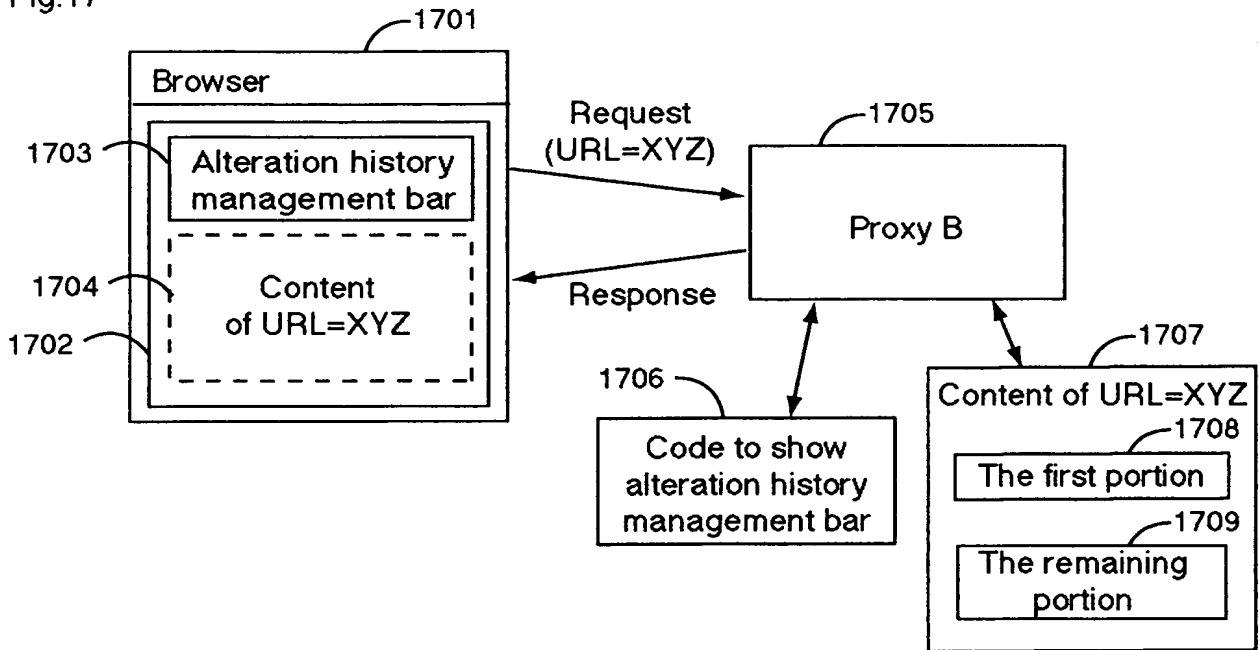
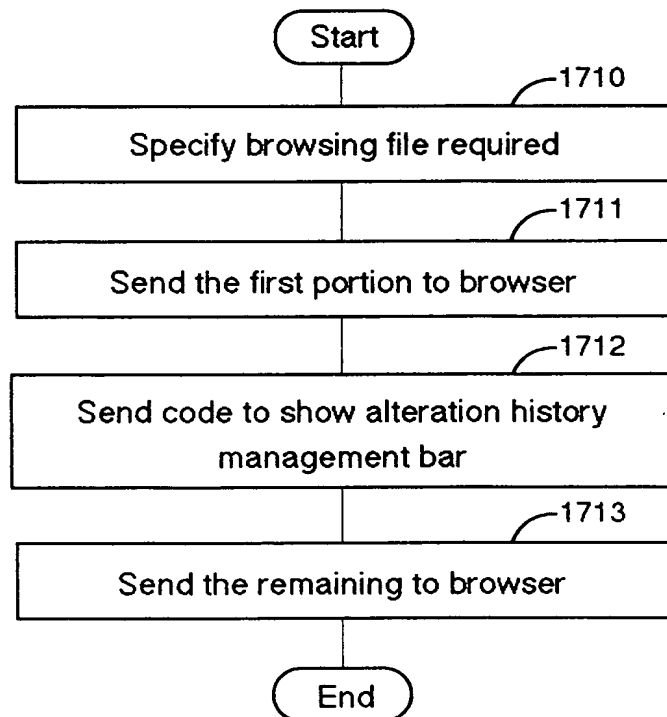
(a) Display to the browser of alteration history management bar(b) Procedure of Proxy B for browsing alteration history management bar

Fig.18

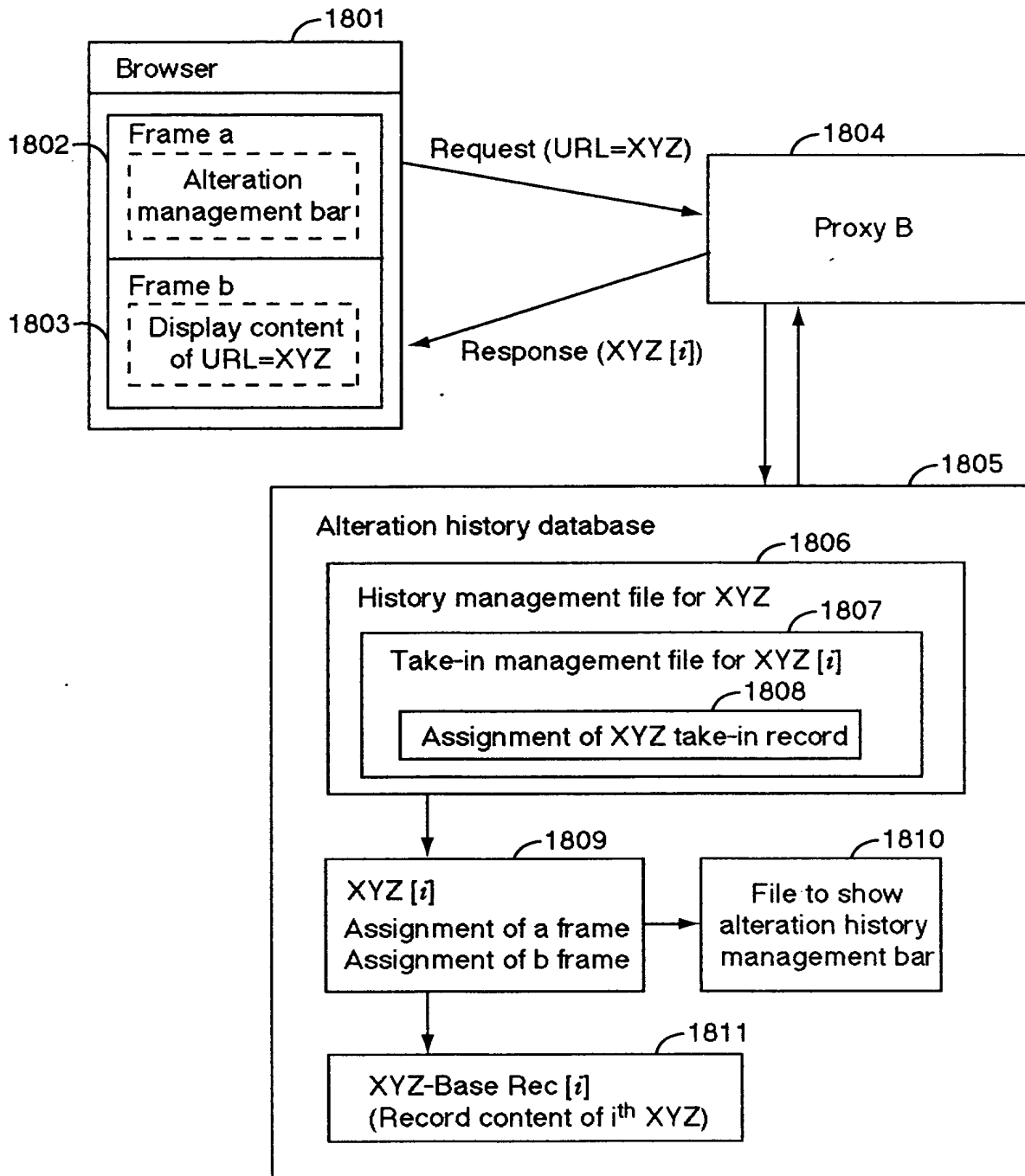


Fig.19

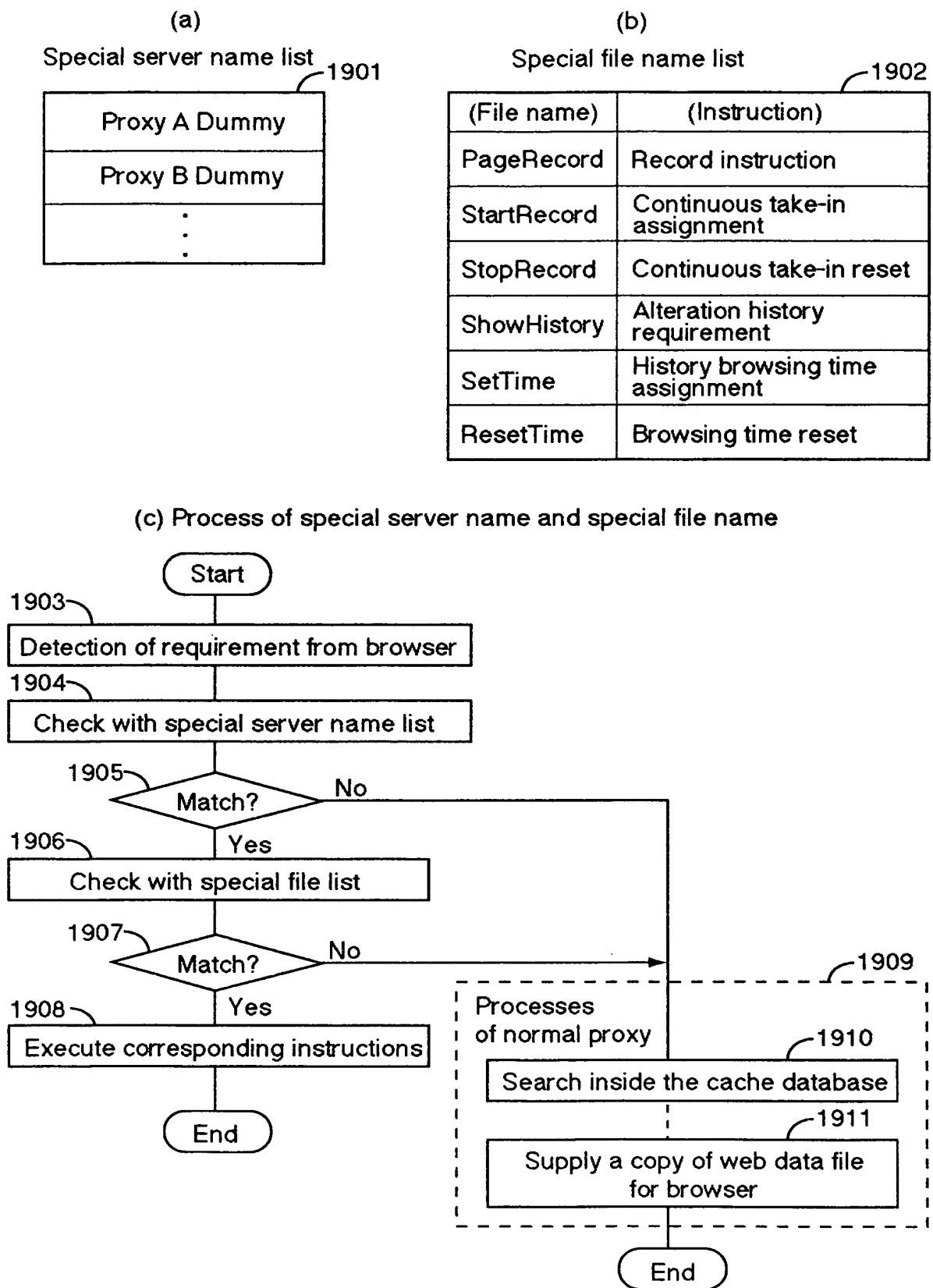


Fig.20

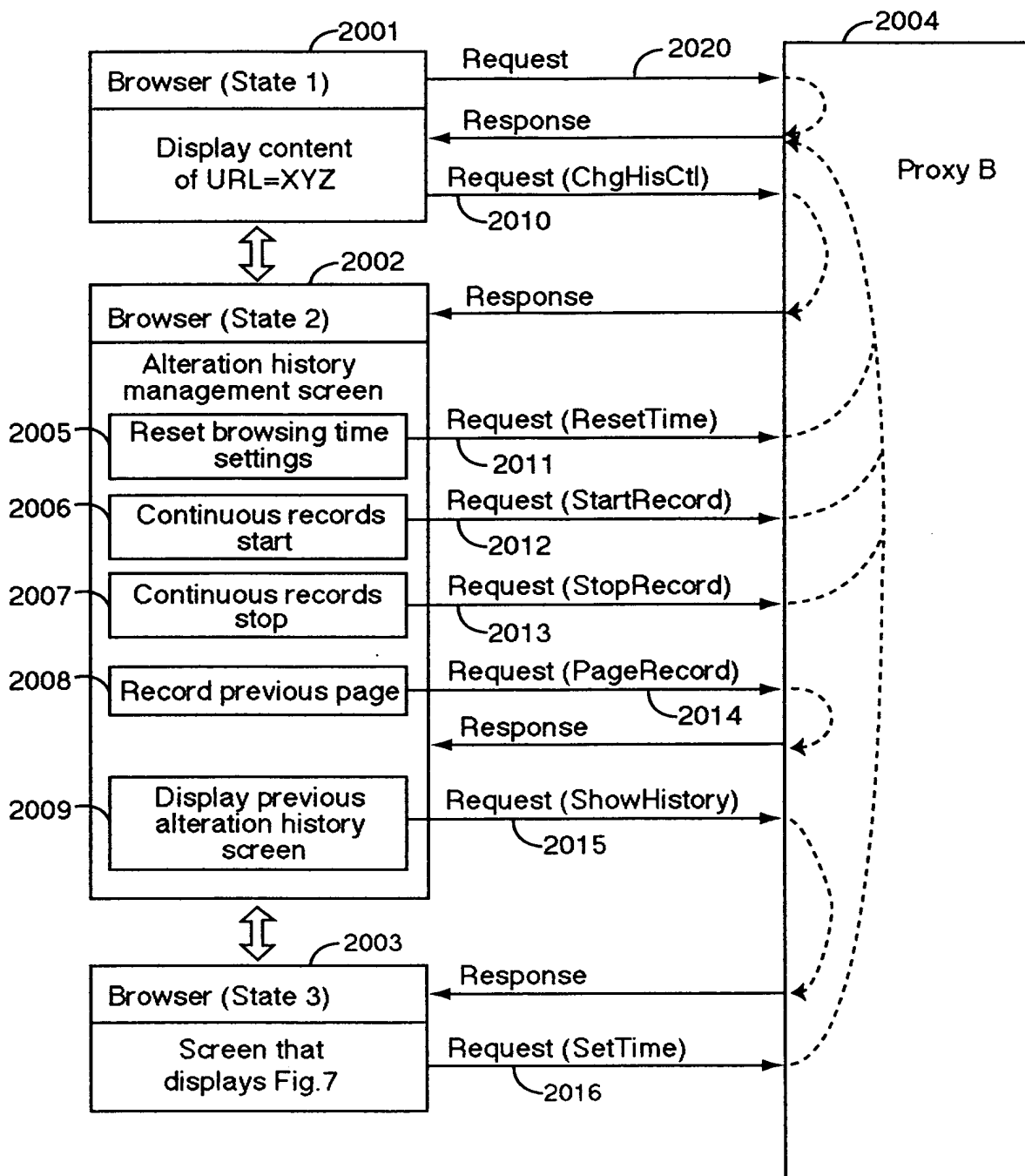


Fig.21

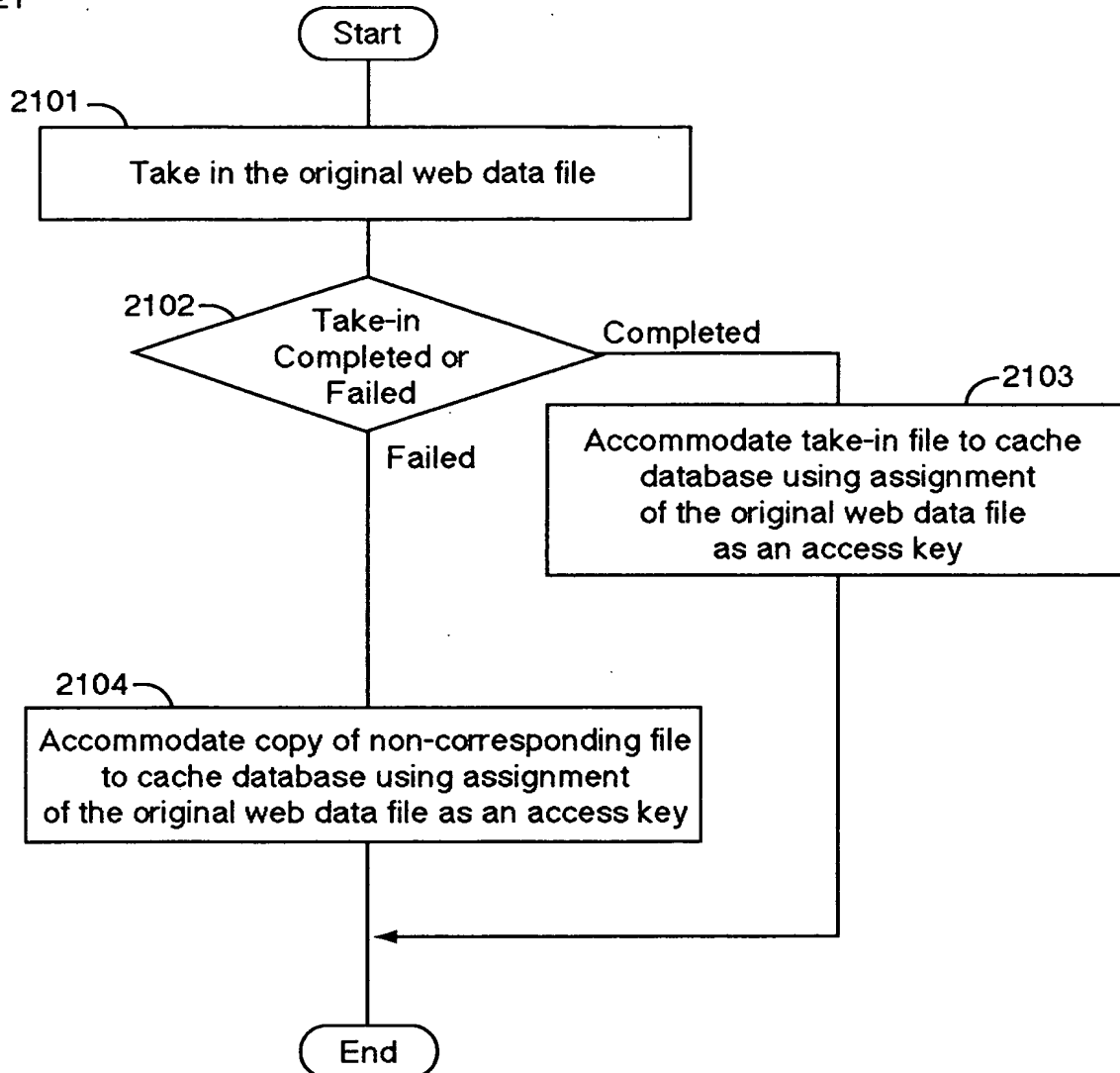


Fig.22

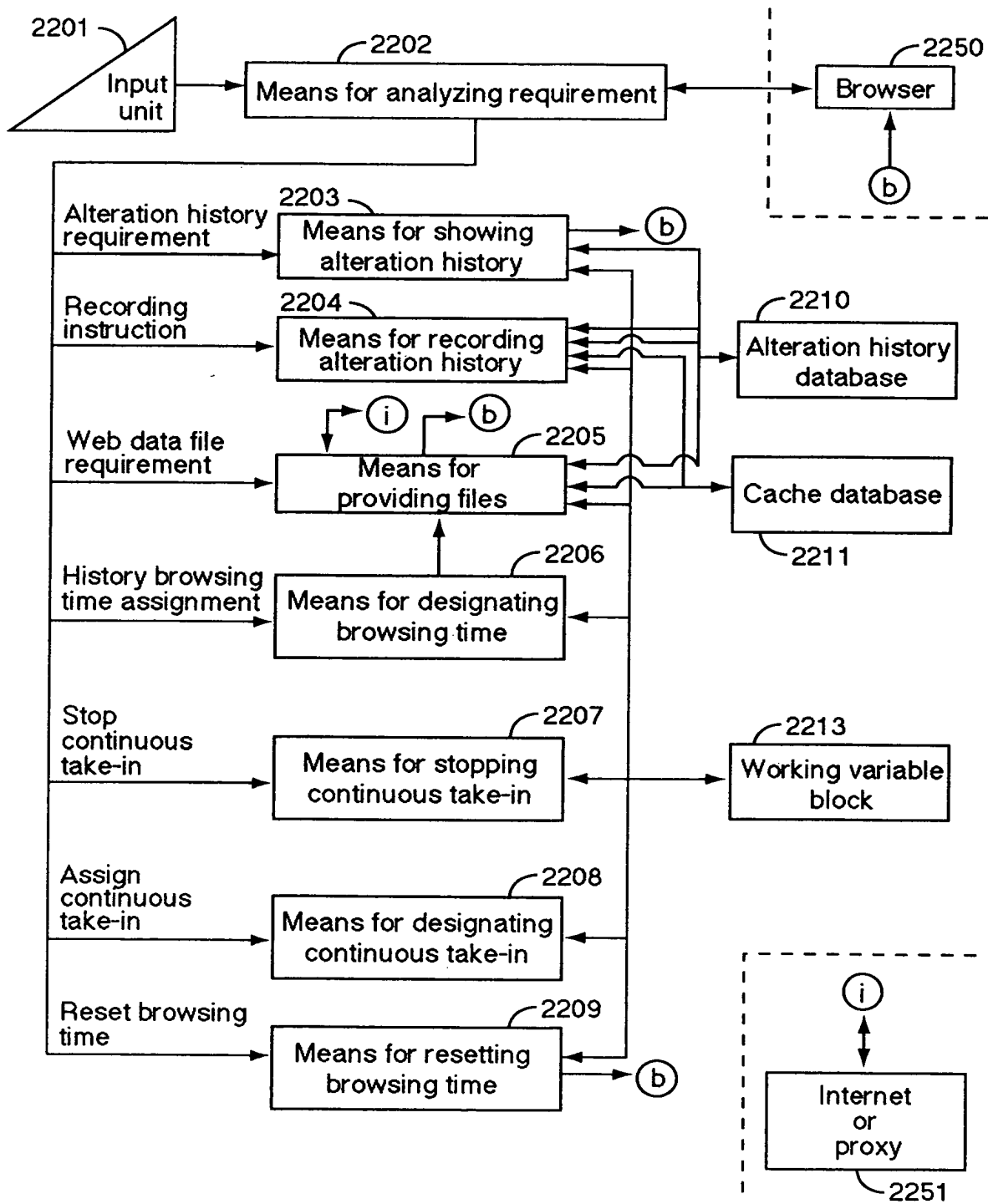
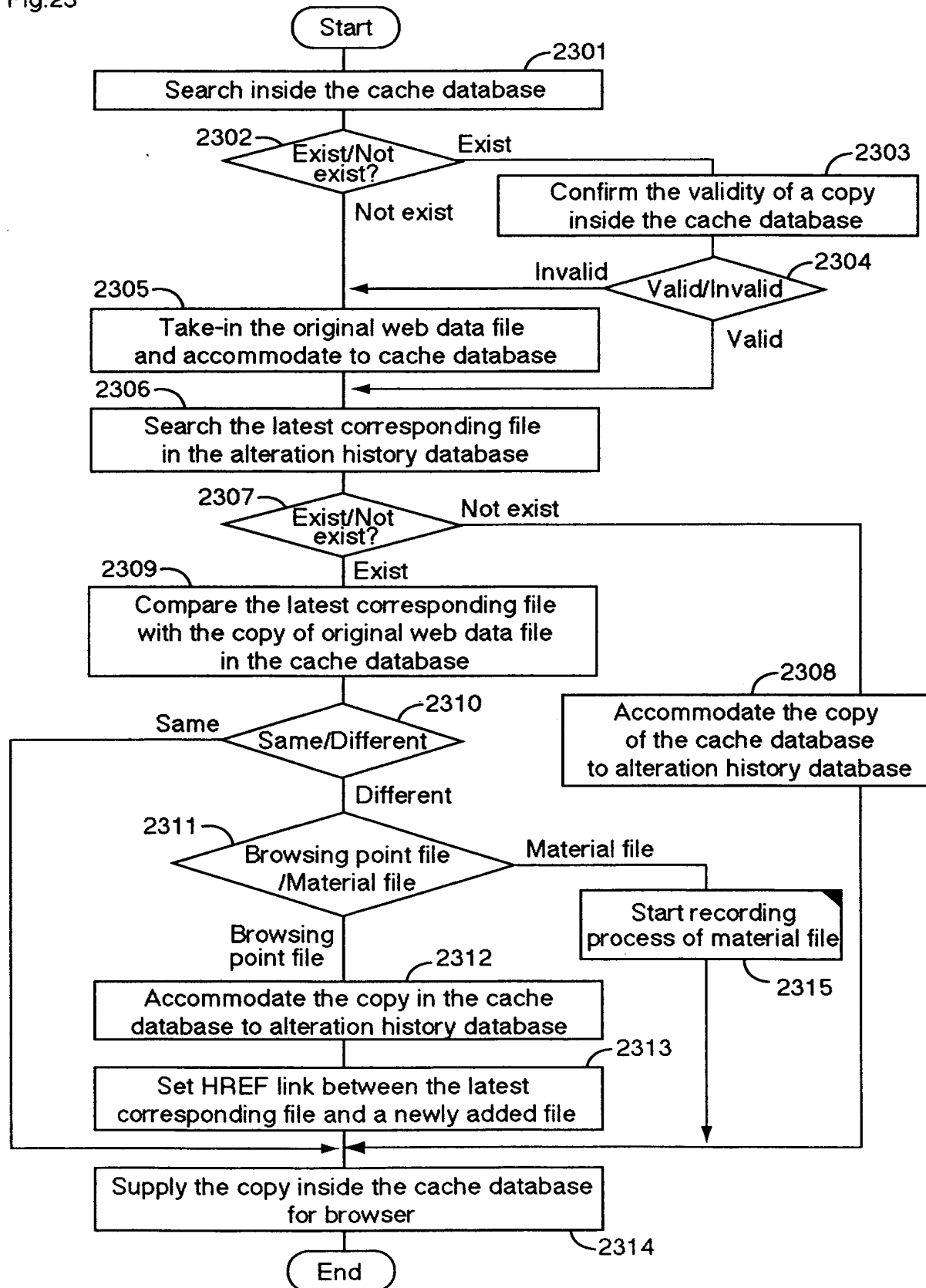


Fig.23



```

graph TD
    Start([Start]) --> 2401[Accommodate the copy of material file  
inside the cache database  
to alteration history database]
    2401 --> 2402[Take out records of browsing point file in order]
    2402 --> 2403{Exist/Not  
exist?}
    2403 -- Not exist --> End([End])
    2403 -- Exist --> 2404[Check whether reference of material  
file of recording subject exists]
    2404 --> 2405{Exist/Not  
exist?}
    2405 -- Not exist --> 2402
    2405 -- Exist --> 2406[Generate a copy of browsing point file's record]
    2406 --> 2407[Set HREF link between the record of browsing point file  
which is the base of the copy and the copy]
    2407 --> 2408[Replace the reference of material file inside the copy  
to a reference of the new browsing point file's record]
    2408 --> 2409[Accommodate the copy to alteration history database]
    2409 --> 2402

```